

**TIMING BELT AUTOTENSIONER
WITH AN ANTI-TOOTH SKIP MECHANISM**

Abstract.

A timing belt autotensioner includes a mechanism actuated by the reversal of timing belt movement direction. In automotive applications reversal of timing belt direction occurs only rarely under inadvertent or accidental circumstances. Such reversals can cause belt slackening sufficient for a toothed belt to jump gear teeth thereby changing engine cam shaft timing. Four related mechanisms are disclosed, each of which will, upon actuation by belt reversal cause the autotensioner pulley axis of rotation to move in a direction that tightens the belt during reverse movement of the belt. Thus, the belt remains tight to the toothed pulleys preventing jump or skip of the belt until the belt returns to proper forward belt movement. A torque limiter incorporated in the mechanism limits to a predetermined amount the torque generated in the mechanism by the reverse movement of the belt.

15 (JMD\Timing Belt Eur. Patent Applic.)